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Dear Sir:

Our organization is interested in the procurement of several items of equipment which were observed by our personnel during their visit to your facilities on 28 and 29 January. As advised by your  in telephone conversation of 5 April, these units do not have assigned nomenclature; therefore, the following descriptions may have to be supplemented.

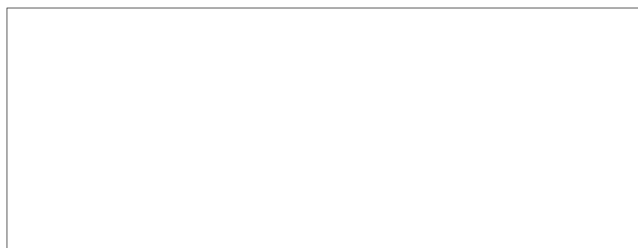
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- a. Two magnetometers with two spare sensors (Hall effect type). The magnetometer consists of an amplifier and a Hall element mounted between ferrite rods encased in plastic. A sensitivity of  $10^{-7}$  gauss is required.
- b. One current clamp making use of a Hall effect sensor. Capable of detecting a minimum current of 2 or 3 microamperes.
- c. Modification of an Ampex Model 350 Magnetic Tape Recorder in accordance with the attached specification, number 60-A-1114-A.

We would be pleased to receive a technical proposal, cost plus fixed fee quotation, and delivery time schedule from you for each of the above items. If it is decided to procure these items from your organization, a new task order will be issued under the current task-type classified contract.

At the time/

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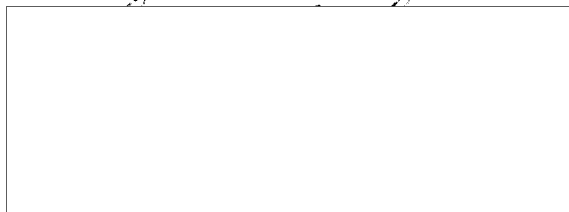
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At the time of submitting the requested proposal, please return this letter, together with enclosures, to the above address. If you do not elect to submit a proposal, this letter and attachments should still be returned.

Very truly yours,



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Enclosures:

Specification No. 60-A-1114-A  
(Two copies)

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*Contract 649*

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*T.O. 1*

SPECIFICATION NO. 60-A-1114-A

SPECIFICATION FOR MODIFICATION OF  
AMPEX MODEL 350 MAGNETIC TAPE TRANSPORT UNIT

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### 1. SCOPE

- 1.1. This specification covers the general requirements for the modification of an Ampex Model 350 Magnetic Tape Transport Unit. This modification entails adapting the Ampex Model 350 units to utilize a modulator playback head instead of a velocity type head. Also, one additional spare head assembly shall be supplied.

### 2. DESIGN REQUIREMENTS

The contractor shall modify an Ampex Model 350 Magnetic Tape Transport Unit in accordance with the following paragraphs. The Ampex Unit will be furnished by the Government to the contractor.

- 2.1. Provisions shall be made for 2 channels of information.

#### 2.2. Tape Width

The tape width used shall be 0.25" with commercial tolerances.

- 2.3. Track width shall be 0.050" and track spacing shall be 0.140".

#### 2.4. Playback Velocity

Two playback speeds 1-7/8" and 3-3/4" shall be provided.

#### 2.5. Signal Noise Ratio

Signal-to-noise ratio shall be a minimum of <sup>40</sup>50 db.

#### 2.6. Distortion

Distortion shall be a maximum of 1%.

#### 2.7. Cross Talk

Cross talk shall be a maximum of 40 db below that level at which 1% distortion occurs.

#### 2.8. Output

The output level shall be 10 volts peak-to-peak at an output terminal with an impedance of 50 ohms or less.

#### 2.9. Frequency Response

The system shall have a frequency response at the output of 0.03 to 7,000 cps flat within  $\pm 1.5$  db at tape speed of 1-7/8 ips or 3-3/4 ips.

12  
40  
120  
 $\lambda = \frac{1575}{103}$   
32  
03  
96  
1  
2

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3.

NOTES

3.1. The tape which shall be used on this system will have been recorded on a system having the following characteristics.

3.1.1. Tape Velocity - 60 ips

3.1.2. Frequency response of <sup>350 not 600</sup> 30 to 100,000 cps within 3 db. <sup>1500 cps</sup>

3.1.3. A dynamic range of more than 50 db.

3.1.4. Distortion of less than 1%.

3.1.5. Track dimensions equal to that given in paragraph 2.3.

3.1.6. Flutter and wow of less than 0.3%.

3.2. The recorded signals will be sine waves and transients lying within the frequency band of 30 to 100,000 cps.

4.

DELIVERABLE ITEMS

Item	Description	Quantity
1	One modified Ampex Model 350 Magnetic Tape Transport Unit.	1 each
2	Spare Head Assembly	1 each
3	Operations and maintenance instructions pertaining to the modifications which have been performed on the Ampex Unit. Illustrations and circuit diagrams shall be included where it is considered they will contribute to the clarity of the instructions.	

5.

GOVERNMENT FURNISHED EQUIPMENT

The Government will furnish to the contractor an Ampex Model 350 Magnetic Tape Transport Unit and essential accessories.

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